REMARKS

Claims 1-26 and 28-35 are pending in the above-identified application. Support for the change to claim 1 is found at page 23, last line to page 24, line 25, as well as in Figures 16A and 16B. Support for new claim 35 is found in the examples in the present specification.

Rejections Under 35 U.S.C. 102(b) and 103(a)

Claims 1, 21, 24, 33 and 34 have been rejected under 35 U.S.C. 102(b) as being anticipated by Cummin '830 (USP 3,252,830) in light of Yokoyama '971 (USP 5,080,971).

Claims 25, 26 and 28 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Cummin '830 in light of Yokoyama '971.

Claim 23 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Cummin '830 in light of Yokoyama '971, and further in view of Yanagihara '799 (USP 4,693,799).

Claim 29 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Cummin '830 in light of Yokoyama '971, and further in view of Kleeberg '290 (USP 5,089,290).

All of the above-noted rejections are traversed for the following reasons.

Present Invention and Its Advantages

Claim 1 has been amended so as to include the optimal processing time for the recited plasma polymerization method. As shown in Figure 16A, a polymeric coating is synthesized on the anode substrate over time and the thickness of the coating increases. However, after a time period of 60 seconds, the thickness of the coating no longer increases and instead decreases. As monomer gas continues to flow over the coating and reacts with remaining non-polymerizable gas, the thickness of the polymer synthesized on the substrate decreases. The attempt to polymerize the non-polymerizable gas and the additionally flowed monomer gas after the synthesis damages the previously formed polymer and thus reduces the thickness of the originally synthesized matter.

Moreover, as shown in Figure 16B, the contact angle varies according to the processing time. The cathode an the anode have the lowest values at 60 seconds which the gaseous pressure reaches a minimum value. When the plasma discharge is performed for over 60 seconds, the

polymer is worn due to the sputtering effect, which results in an increase in the contact angle properties. As can be seen in Figs. 16A and 16B, when introducing monomer gas into the chamber during the discharge polymerization process, the thickness of the polymer increases, however the contact angle properties deteriorate when the polymerization time is over 60 seconds.

Distinctions Over Cited References

All of the references relied upon for the above-noted rejections fail to disclose or suggest the plasma polymerization method time period range of 5-60 seconds as recited in step (D) of present claim 1. All of these references fail to recognize the advantageously improved thickness and integrity of the polymeric coating when the appropriate time period is employed as in the method of the present invention. Additional distinctions between the present invention and the cited references are provided below.

Cummin '830 is directed to a method of making an electric capacitor in which a substrate sheet **6** including an electrical insulating material layer and a metallized layer is subjected to "glow discharge" conditions which include using DC current through electrodes **4** and **5** in a chamber **1** which is at least partially evacuated and into which a monomeric gas, such as an aliphatic unsaturated compound gas (e.g. acetylene), is introduced optionally together with an inert carrier, such as nitrogen, as described at column 4.

Cummin '830 fails to disclose depositing a polymer through plasma polymerization on the surface of an anode electrode as in the present invention, since Cummin '830 apparently requires that the substrate sheet **6** include an electrical insulating material layer as described at column 4, lines 43-59. In addition, Cummin '830 fails to disclose or suggest the time period feature of the present invention as discussed above. Consequently, significant patentable distinctions exist between the present invention and Cummin '830.

Yokoyama '971 discloses a process for making a magnetic recording medium which employs plasma polymerization as described at column 4, lines 18-49. It appears that the substrate upon which the polymer is deposited through plasma polymerization includes all of a first substrate **2** of a non-magnetic material, an undercoat layer **3** which is preferably a nickel

alloy, a magnetic layer which may be a cobalt-nickel alloy or related alloy, an intermediate magnetic layer **5** which is preferably chromium, a protective non-magnetic metal film preferably of chromium, and a topcoat layer **9** which is the plasma-polymerized film.

Yokoyama '971 fails to disclose the employment of the substrate that is plasma-polymerized as an anode electrode as in the present invention. In addition, Yokoyama '971 fails to disclose or suggest the time period feature of the present invention as discussed above. Consequently, significant patentable distinctions exist between the present invention and Yokoyama '971.

Yanagihara '799 discloses a process for producing plasma-polymerized film in which a substrate tape **11** for magnetic recording media is treated to plasma polymerization by being run continuously between two electrodes **3** and **4** as shown in Figure 2 and described at column 8.

Yanagihara '799 fails to disclose the employment of the substrate that is plasma-polymerized as an anode electrode as in the present invention. In addition, Yanagihara '799 fails to disclose or suggest the time period feature of the present invention as discussed above. Consequently, significant patentable distinctions exist between the present invention and Yanagihara '799.

Kleeberg '290 discloses a method for generating glow polymerisate layers from hydrocarbons and/or fluorocarbons. The method employs a device which includes a discharge tube **1** of glass having a discharge chamber **2**, with two electrodes **3** and **4** arranged outside of the tube **1**. A substrate **5** is disposed in the chamber **2** for being coated.

Kleeberg '290 fails to disclose or suggest employing electrodes within a polymerization chamber as in the method of the present invention. Kleeberg '290 also fails to disclose or suggest employing a substrate to be coated in place of one of the electrodes as in the method of the present invention. In addition, Kleeberg '290 fails to disclose the time period feature of the present invention as noted above. Consequently, significant patentable distinctions exist between the present invention and Kleeberg '290.

In addition to the above, it is noted that new claim 35 recites that the anode substrate is formed entirely of metal which is completely inconsistent with all of Cummin '830, Yokoyama

'971 and Yanagihara '799 which all describe plasma treatments of substrates that include non-metallic layers.

It is submitted for the reasons stated above that all of the presently pending claims define patentable subject matter such that the present application should be placed into condition for allowance.

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Respectfully submitted,

By_____

Andrew D. Meikle
Registration No.: 32,868
BIRCH, STEWART, KOLASCH & BIRCH, LLP
8110 Gatehouse Rd
Suite 100 East
P.O. Box 747
Falls Church, Virginia 22040-0747
(703) 205-8000
Attorney for Applicant